



IN THE SPECIFICATION

Please amend the paragraph beginning at page 1, line 11 through page 2, line 1, as follows:

BACKGROUND ART

In a semiconductor device manufacturing field, such a plasma processing apparatus [[have]] has been conventionally used, that performs predetermined processing (for example, etching, deposition, or the like) by generating plasma in a process chamber and having this plasma act on a substrate to be processed (for example, a semiconductor wafer, a glass substrate for LCD, or the like) disposed in the process chamber. In such a plasma processing apparatus, the application of the predetermined processing on the substrate to be processed by the action of plasma is conducted in a vacuum chamber, the inside of which can be airtightly closed. In a plasma processing apparatus of, for example, a so-called parallel-plate electrode type, a top electrode and a bottom electrode are provided in this vacuum chamber, facing and being parallel to each other. The predetermined processing is applied in such a manner that the substrate to be processed is placed on the bottom electrode, a radio-frequency power is supplied between the top electrode and the bottom electrode to generate plasma of processing gas, and the plasma is made to act on the substrate to be processed.

Please amend the paragraph beginning at page 8, line 20 through page 9, line 1, as follows:

Further, a refrigerant flow path 10 to circulate a refrigerant and a gas introducing mechanism 11 to supply He gas to a rear face of the wafer W for efficient conduction of [[cool]] heat from the refrigerant to the wafer W are provided in the bottom electrode 2, so that the temperature of the wafer W can be controlled to a desired temperature. Pipes or the like for supplying the refrigerant and the He gas to these refrigerant flow path 10 and gas

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introducing mechanism 11 from the outside are provided to be positioned at the outer peripheral portion of the bottom electrode 2.